

Amendments to the Claims

Please cancel Claims 1-17. Please add new Claims 18-36.

The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

Claims:

1-17 (Canceled)

18. (New) A functionalized polyazole comprising recurring imidazole units of the general formula



and/or



and/ or



and/or



where the radicals Ar, Ar¹ and Ar² are tetravalent, divalent or trivalent aromatic or heteroaromatic groups,

Y is a bond or a group having from 1 to 20 carbon atoms,

v is an integer from 1 to 10 and

Z is a group of the general formula



or

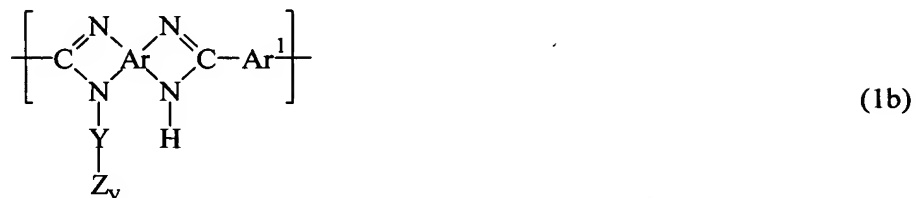


where R¹ and R² are each, independently of one another, a hydrogen atom or a group having from 1 to 20 carbon atoms, characterized in that the solubility of the polyazole in N,N-dimethylacetamide is at least 0.1 g, based on 100 g of solution, at 100°C.

19. (New) A functionalized polyazole comprising recurring imidazole units of the general formula



and/or



and/ or



and/or



where the radicals Ar, Ar¹ and Ar² are tetravalent, divalent or trivalent aromatic or heteroaromatic groups,

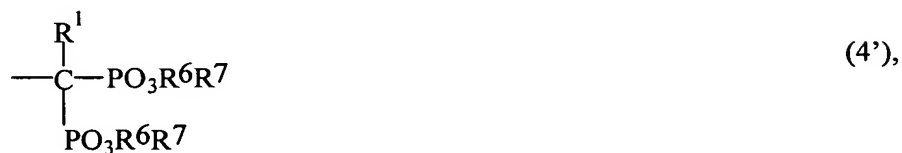
Y is a bond or a group having from 1 to 20 carbon atoms,

v is an integer from 1 to 10 and

Z' is a group of the general formula

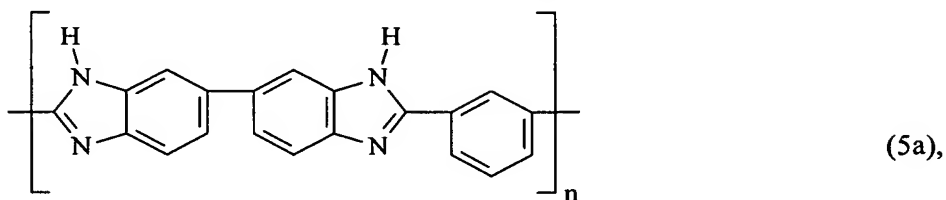


or



where R¹ and R² are each, independently of one another, a hydrogen atom or a group having from 1 to 20 carbon atoms and R⁶ and R⁷ are each, independently of one another, a group having from 1 to 20 carbon atoms.

20. (New) The polyazole of claim 18, characterized in that the polymer comprises recurring benzimidazole units of the formula (5a):



where n is an integer greater than or equal to 10.

21. (New) The polyazole of claim 18, characterized in that it is doped with an acid.
22. (New) The polyazole as claimed in claim 21, characterized in that the degree of doping, expressed as mole of acid per mole of repeating units of the polymer, is from 3 to 15.
23. (New) The polyazole of claim 18, characterized in that the group Y is a radical having 1 or 2 carbon atoms.
24. (New) The polyazole of claim 18, characterized in that it has a molar ratio of phosphorus to nitrogen, P/N, measured by means of elemental analysis in the range from 0.02 to 0.5.
25. (New) A process for preparing functionalized polyazoles of claim 19, comprising the steps of

- A) dissolving a polymer comprising recurring imidazole units of the general formula



and/or



in a solvent, to thereby form a first solution;

B) reacting the first solution with a base to form a second solution,

C) reacting the second solution with at least one phosphonate of the general formulae



and/or



where R^3 , R^4 and R^5 are each, independently of one another, a hydrogen atom or a group having from 1 to 20 carbon atoms,

R^6 and R^7 are each, independently of one another, a group having from 1 to 20 carbon atoms,

X is a leaving group and

Y' is a bond or a group having from 1 to 20 carbon atoms.

26. (New) The process of claim 25, further including adding an acid to the solution of step C.

27. (New) The process of claim 25, further including adding a base having a pK_B at 25°C of less than 7 to the solvent in step A.
28. (New) The process of claim 25, characterized in that phosphonates of the general formulae



where m is an integer from 0 to 11 and the radicals X, R^6 and R^7 are as defined above, is used as the phosphonate in step C.

29. (New) A polyazole obtainable by a process of claim 26.
30. (New) A polymer electrolyte membrane coated with polyazoles of claim 18.
31. (New) A membrane-electrode unit comprising ionomers of polyazoles in claim 30.
32. (New) A polymer electrolyte membrane comprising polyazoles of claim 18.
33. (New) A membrane-electrode unit comprising a polymer electrolyte membrane of claim 32.
34. (New) A fuel cell comprising a membrane-electrode unit of claim 33.
35. (New) A membrane-electrode unit comprising ionomers of the polyazoles of claim 18.
36. (New) A fuel cell comprising a membrane-electrode unit of claim 35.